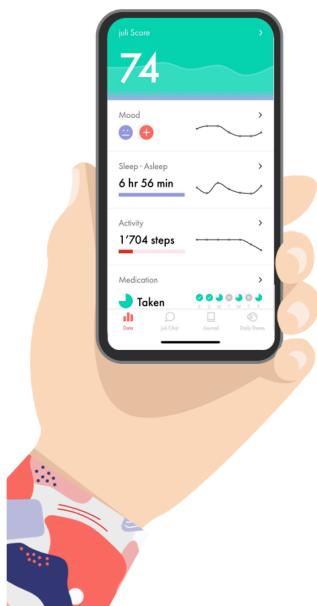




## Why does engagement matter in health apps?



### SUMMARY:

- Good apps support healthcare effectively, but only if they are used regularly by patients
- Retention and engagement drive clinical outcomes
- Most health apps struggle to retain patients
- juli has proven to drive very high retention well above industry norms
- Personalization, gamification, reminders and a highly personable UI help drive continued utilization

There is a shortage of healthcare providers in the US and consumers are increasingly turning online for help. This drives new technology to step in and fill the gaps. Digital supportive technologies are particularly useful as smartphones are widely used amongst the population regardless of social determinants and increasingly in people of all ages.

## Digital Support Requires Engagement And Retention

Digital supportive technologies to facilitate monitoring, intervention and follow-up have the potential to improve outcomes in most patient populations, especially people with chronic conditions. However, recent studies have shown significant challenges keeping people engaged with these apps. A recent large-scale Stanford-led study using an app for cardiovascular health showed that the average usage was only 4.1 days.<sup>1</sup>

Getting patients to download a health app isn't enough to drive impact. Users need to see a benefit, be engaged and even have fun to stay interested enough to actually use them. Easier said than done; most apps and especially health apps struggle to achieve user engagement and retention. This is particularly important when it comes to chronic condition management as consistency is essential for positive outcomes.

## The juli App

juli is an app for people with chronic conditions. As of March 2023, more than 25,000 patients have downloaded juli. They all suffer from one or more of the following conditions:

### juli conditions

- Anxiety
- Asthma
- Chronic pain
- COPD
- Migraine
- Bipolar disorder
- Depression
- Hypertension
- Non-migraine headaches

<sup>1</sup> Hershman SG, Bot BM, Shcherbina A, Doerr M, Moayedi Y, Pavlovic A, et al. Physical activity, sleep and cardiovascular health data for 50,000 individuals from the MyHeart Counts Study. Sci Data 2019 Apr 11;6(1):2

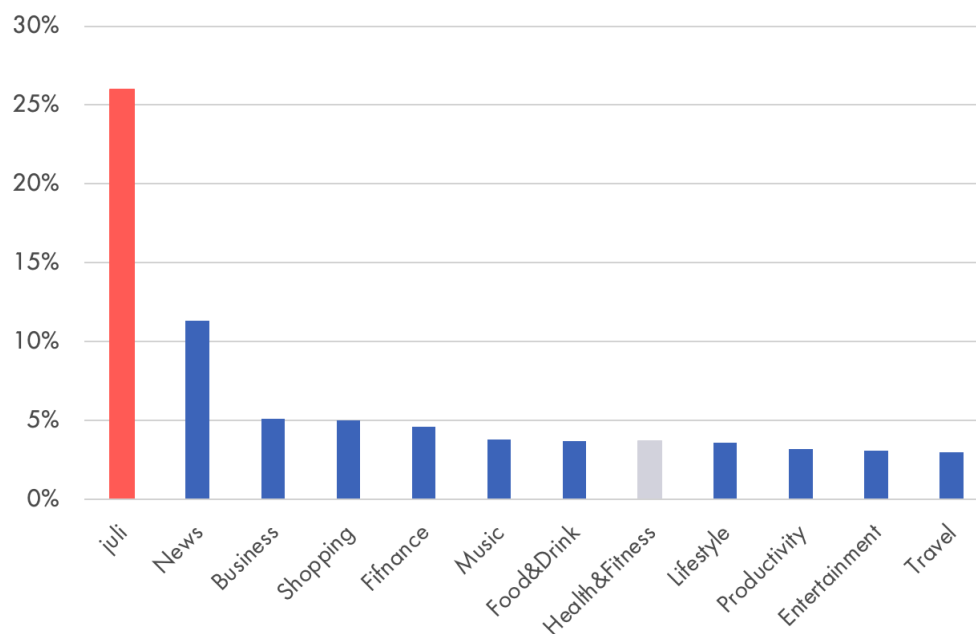


## Retention of juli Users

The industry standard for measuring mobile app retention is the percentage of users still using the app after one month. It varies by type of app, but apart from news apps (11%), most app categories show retention rates between 1.5 and 5%.<sup>2</sup>

Health and fitness apps, on average, only retain 3.7% of users after 30 days. Contrast that with juli, where 26% stay with the app for this benchmark period. Over longer periods, users continue to access the app: after 2 months our retention is 18%. This is achieved without any human intervention.

### Day 30 Retention Rate by Category



**7x** industry norm of 30 days retention

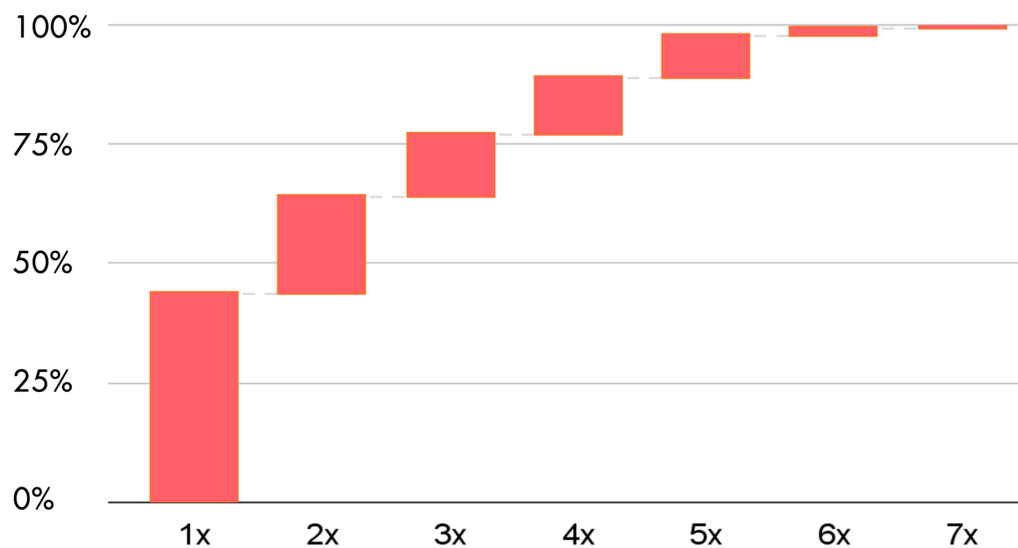
<sup>2</sup> <https://www.appsflyer.com/resources/reports/app-retention-benchmarks/>

## Engagement of juli Users

App engagement is generally measured using a combination of active users, app opens, and session length. juli becomes more valuable for users the more they use it, which in turn increases their motivation to use juli. To support users in their journey to better health, apps like juli need enough data to perform data analyses.

juli has achieved outstanding user engagement. More than half of juli users use the app  $\geq$  twice per week. This also enables juli to deliver recommendations to users on a regular basis, truly empowering them to improve their health.

### juli Engagement Rate



**2.2** times a week active juli users use the app

## Measures to Improve Engagement and Retention

Various features and functions have been tried and tested for their impact on either engagement or retention of patients. The following have shown a measurable and significant impact on both:

### 1. User-friendly interface

Various usability tests have shown that the juli app is particularly easy to navigate and use. It has been developed with a consumer marketing orientation rather than as purely a health app, i.e. using a chat-based conversation in a friendly and engaging tone, reducing daily user effort to an absolute minimum while rewarding them with useful but short information and recommendations. Chronic condition patients often do not self-identify with their condition as a major determinant of their life and appreciate that an app does not feel like a health tool.

### 2. Personalization

Customization makes users feel more invested in the app. Personalized interpretations of the patient's health data and unique recommendations offer individualized support. Frequently utilizing the user's name throughout the app helps support their identification of these elements as individualized features.

### 3. Reminders in and outside the app

Medication adherence as well as completion of health related tasks can be supported with various forms of reminders. This helps patients stay on track with their treatment plan and avoid complications, Reminders are more effective the more they are displayed independently from the app. Examples for this are notifications on the phone or smartwatch screen, little numbers on the corner of the app icon that show the number of tasks overdue, or a home screen widget showing the most relevant information.

#### 4. Gamification

Gamification is the process of adding game-like elements to a non-game context. Incorporating elements such as badges, points and levels increases engagement and motivates patients to use the app. About 1/3 of juli users actively utilize its gamified features on a regular basis.

## A Self-Reinforcing Cycle

A health app like juli collects a large amount of data, previously siloed in different devices or apps. Processing this data with AI-driven learning algorithms enables individualized recommendations. Tracking the results of these recommendations creates a self-reinforcing cycle that gets more potent with every data point gathered. This ultimately leads to increased retention and engagement.

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